AMENDMENTS TO THE CLAIMS

Claims 1 – 86 (Canceled).

87.   (Currently Amended) A method comprising:

assigning a plurality of segment IDs to a plurality of channels associated with a plurality of digitized segments of data;

determining a boundary number that represents a number of segment IDs to be aggregated into a first section and a number of corresponding digitized segments of data to be aggregated into a second section;

aggregating the determined boundary number of segment IDs into the first section, wherein the segment IDs share a destination node, wherein aggregating comprises, if the number of segment IDs that share the destination node is less than the boundary number of segment IDs, adding an inactive segment ID so the number of segment IDs is equal to the boundary number of segment IDs;

aggregating the determined boundary number of digitized segments of data into the second section, wherein each aggregated digitized segment of data in the second section is associated with a segment ID in the first section, wherein aggregating comprises, if an inactive segment ID is added, adding an associated inactive data segment;

combining the first section and the second section into a packet segment;

appending a network header to the packet segment to create a multi-channel packet; and

transmitting the multi-channel packet over a network.

88.   (Canceled)

89.   (Previously Presented) The method of claim 87, wherein the boundary number is four.

90.   (Canceled)

91.   (Previously Presented) The method of claim 87 wherein the network header includes a local area network (LAN) header and the network includes a local area network (LAN).

92. (Previously Presented) The method of claim 91, wherein the LAN is an Ethernet, and the LAN header is a media access control (MAC) header.

93. (Previously Presented) The method of claim 87, where one or more of the channels are fax channels, and one or more of the digitized segments of data represent fax data.

94. (Previously Presented) The method of claim 87, where one or more of the channels are voice channels, and one or more of the digitized segments of data represent voice data.

95. (Previously Presented) The method of claim 94, wherein one or more of the digitized segments of voice data include at least one sample of pulse-code modulated (PCM) voice data.

96. (Previously Presented) The method of claim 87, wherein one or more of the digitized segments of data are obtained from a time-division multiplexed (TDM) stream of data.

97. (Previously Presented) The method of claim 87, wherein one or more of the digitized segments of data are obtained from an asynchronous transfer multiplexed (ATM) stream of data.

98. (Previously Presented) The method of claim 87, wherein one or more of the digitized segments of data are obtained from a payload of an input packet.

99. (Previously Presented) The method of claim 98, wherein the input packet is an Real Time Protocol (RTP) packet.

100. (Currently Amended) An apparatus for arranging digitized segments of data comprising:

a data segment receiver to receive a plurality of data segments each having a digitized segment of voice data;

a voice channel identifier to determine which of a plurality of voice channels is associated with each of the received data segments and to generate an associated segment ID for each data segment; and

a data segment aggregator to aggregate a determined boundary number of segment IDs into a first section and to aggregate the determined boundary number of digitized segments of data into a

second section, wherein the aggregator adds an inactive segment ID if the number of segment IDs that share a destination node is less than the determined boundary number of segment IDs so the number of segment IDs is equal to the boundary number of the segment IDs, and adds an inactive data segment if the inactive segment ID is added;

a multi-channel voice packet generator to combine the first section and the second section into a packet segment and to append a local area network (LAN) header to the packet segment to create a multi-channel voice packet; and

a packet transmitter to transmit the multi-channel voice packet over a LAN.

101. (Canceled)

102. (Previously Presented) The apparatus of claim 100, wherein the determined boundary number is four.

103. (Previously Presented) The apparatus of claim 100, wherein the segment IDs are each 2 bytes in length.

104. (Currently Amended) An article of manufacture comprising:

a machine accessible medium including content that when accessed by a machine causes the machine to perform operations comprising:

assigning a plurality of segment IDs to a plurality of channels associated with a plurality of digitized segments of data;

determining a boundary number that represents a number of segment IDs to be aggregated into a first section and a number of corresponding digitized segments of data to be aggregated into a second section;

aggregating the determined boundary number of segment IDs into the first section, wherein the segment IDs share a destination node, wherein aggregating comprises, if the number of segment IDs that share the destination node is less than the boundary number of segment IDs, adding an inactive segment ID so the number of segment IDs is equal to the boundary number of segment IDs; and

aggregating the determined boundary number of digitized segments of data into the second section, wherein each aggregated digitized segment of data in the second section is associated with a

segment ID in the first section, wherein aggregating comprises, if an inactive segment ID is added, adding an associated inactive data segment;

combining the first section and the second section into a packet segment;

appending a network header to the packet segment to create a multi-channel packet; and

transmitting the multi-channel packet over a network.

105.   (Previously Presented) The article of manufacture of claim 104, wherein the boundary number is four.

106.   (Previously Presented) The article of manufacture of claim 104, wherein the network header includes a local area network (LAN) header and the network includes a local area network (LAN).